

**MOLDING SYSTEM FOR MOLDING MICRO PATTERN STRUCTURE HAVING  
MICRO HEATING ELEMENT AND METHOD FOR FABRICATING MOLD  
INSERT FOR MOLDING MICRO PATTERN STRUCTURE USED THEREIN**

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Abstract

A molding system for molding a micro pattern structure includes a mold; a mold insert 6 having a micro pattern, the mold insert 6 being fixed to the mold; and a micro heating element 30 having a micro heater 32 between the mold and the mold insert 6, the micro heater 32 being formed in an integrated manner by using a MEMS process; wherein the amount of Joule's heat produced by the micro heater 32 is controlled by controlling the amount of electricity applied to the micro heater 32 so as to control a temperature of the mold insert 6. A method for fabricating the mold insert 6 for molding the micro pattern structure, the mold insert 6 being heated by a micro heater 32, includes the steps of: coating a photoresist on a back side of either the mold insert 6 or a plate 40 fixed onto the mold insert 6; patterning the photoresist by removing a part of the photoresist corresponding to the micro heater 32 using a lithography process; coating a material for forming the micro heater 32; and removing the residual photoresist.